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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,505	01/09/2002	Gary J. Cross	AUS920010952US1	6747

35525 7590 04/22/2005

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EXAMINER

ALOMARI, FIRAS B

ART UNIT	PAPER NUMBER
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2136

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/042,505

Applicant(s)

CROSS, GARY J.

Examiner

Firas Alomari

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>03/05/2002</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Specification

1. The disclosure is objected to because of the following informalities: the serial number of copending application mentioned on page 1 is missing.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 7-10, 17-20 and 27-30 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 7-8, 17-18 and 27-28: the claims recite the term

“encrypting....input analog signal”, it not clear to the examiner which analog signal is exactly being encrypted. Its not clear if the first input analog signal from the microphone being encrypted again or if the there is another input analog signal being encrypted. The examiner will interpret the claims to their broadest reasonable interpretation until a more clear presentation of the claims has been

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displayed. Claims 9-10, 19-20 and 29-30 are rejected on virtue of their dependency on claims 1, 9 and 17.

3. Claims 4, 14 and 24 contain the trademark/trade name Java. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe software application method and, accordingly, the identification/description is indefinite.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5-6, 11, 15-16, 21 and 25-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Ashby et al. US (5,305,384).

Regarding claims 1,11 and 21: Ashby discloses a method for securing radio transmissions utilizing a conventional radio (See Abstract), said method comprising the steps of:

Providing a conventional radio, said conventional radio being incapable of encrypting or decrypting signals; (Col 9, Lines 24-27 and item 12 of FIG. 1)

Providing a computer system coupled between a microphone and said radio, wherein inputs into said radio are received first by said computer system, said computer system being separate and apart from said radio; (Col 17, Lines 44-56 and item 10 of FIG.1)

Receiving, within said computer system, an input analog signal from said microphone; (Col 21, Lines 57-61 and items 38 of FIG. 4)

Encrypting, within said computer system, said input analog signal utilizing public key encryption; (Col 22, Lines 2-5; Col 14, lines 32-36 and Col 23, lines 31-32) passing said encrypted input analog signal from said computer system to said radio; (Col 22, Lines 16-24)and

Transmitting said encrypted input analog signal utilizing said radio, wherein radio transmissions from said radio are secured. (Col 22, Lines 24-31)

Regarding claims 5, 15 and 25: Ashby discloses the method according to claim 1, further comprising the step of passing said encrypted analog signal from said computer system to a microphone port included in said radio. (Col 21, Lines 42-47)

Regarding claims 6, 16 and 26: Ashby discloses the method according to claim

1, further comprising the steps of:

providing a second conventional radio, said second conventional radio being incapable of encrypting or decrypting signals; (Col 22, Lines 35-38 and item 12 of FIG 5)

providing a second computer system coupled between a speaker and said second radio, wherein outputs from said second radio are received first by said second computer system before being output to said speaker, said second computer system being separate and apart from said second radio;(Col 17, Lines 44-56; Col 22, lines 44-48 and item 10 of FIG.1)

receiving, within said second computer system, an encrypted output from a speaker port included within said second radio; (Col 22, Lines 37-40 and item 32 of FIG. 5)

decrypting, within said second computer system, said encrypted output utilizing public key encryption; (Col 22, Lines 48-56; Col 14, lines 32-36 and Col 23, lines 31-32) and

outputting said decrypted output from said second computer system to said speaker. (Col 22, Lines 56-59)

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-3, 12-13, 22-23, 7-10, 17-20 and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashby et al. US (5,305,384) in view of Mohapatra P K, Public key cryptography, Fall 2000, ACM, Volume 7, Issue 1, Pages 14-22.

Regarding claims 2,12 and 22: Ashby discloses The method according to claim 1 comprising the step of encrypting, within said computer system, said input analog signal utilizing DES and indicates that other encryption methods could be carried out in the invention but he doesn't explicitly disclose a key pair including a public key and a private key. However Mohapatra discloses a method for securing communication over insecure network where he teaches using a key pair, public key and private key to secure data transmission (page 3, Paragraph 5).

Therefore it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify Ashby's system with the teachings of Mohapatra to utilize a key pair consisting of private key and a public key to encrypt input analog signal. One would be motivated to do so in order to provide

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the system with additional security and to overcome the key exchange and management disadvantages (page 3, Paragraph 1)

Regarding claims 3,13 and 23: Ashby doesn't explicitly disclose the method according to claim 2, comprising the step of encrypting input analog signal utilizing said public key. However Mohapatra discloses an encryption method where the system encrypts a message M using the recipient public key (pages 5-6 Figure 4 step 1). Therefore it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify Ashby's system with the teachings of Mohapatra to use the public key to encrypt the input analog signal. One would be motivated to do so in order to provide the system with additional security and to overcome the key exchange and management disadvantages (page 3, Paragraph 1)

Regarding claims 7,17 and 27: Ashby doesn't explicitly disclose the method according to claim 6, further comprising the step of encrypting, within said computer system, said input analog signal utilizing a key pair, said key pair including a public key and a private key. However Mohapatra discloses a method for securing communication over insecure network where he teaches using a key pair, public key and private key to secure data transmission (page 3, Paragraph 5). Therefore it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify Ashby's system with the teachings of Mohapatra to utilize a key pair consisting of private key and a public key to

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encrypt input analog signal. One would be motivated to do so in order to provide the system with additional security and to overcome the key exchange and management disadvantages (page 3, Paragraph 1)

regarding claims 8,18 and 28: Ashby doesn't explicitly disclose the method according to claim 7, further comprising the step of encrypting, within said computer system, said input analog signal utilizing said public key. However Mohapatra discloses an encryption method where the system encrypts a message M using the recipient public key (pages 5-6 Figure 4 step 1). Therefore it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify Ashby's system with the teachings of Mohapatra to use the public key to encrypt the input analog signal. One would be motivated to do so in order to provide the system with additional security and to overcome the key exchange and management disadvantages (page 3, Paragraph 1)

Regarding claims 9,19 and 29: Ashby doesn't explicitly disclose the method according to claim 8, further comprising the steps of: obtaining, by said second computer system, said private key of said computer system; and decrypting said encrypted input analog signal utilizing said private key. However Mohapatra discloses an encryption method where the system encrypts a message M using the recipient public key (pages 5-6 Figure 4 step 1) and decrypt the message using the corresponding private key (pages 5-6 Figure 4 step 1). One would be motivated to do so in order to provide the system with additional security and to

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overcome the key exchange and management disadvantages (page 3, Paragraph 1)

Regarding claims 10,20 and 30: Ashby doesn't explicitly disclose the method according to claim 9, further comprising the step of exchanging said private key between said computer system and said second computer system prior to transmissions of radio signals. However Mohapatra discloses a key exchange method to be used between different recipients to share secret or private keys to be used to encrypt or decrypt messages(Page 10, paragraphs 1-3). Therefore it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify Ashby's system with the teachings of Mohapatra to include a key exchange protocol to share the private key between the two computers. One would be motivated to do so in order to enable the system to decrypt analog signals encrypted using the sender public key.

5. Claims 4,14 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashby et al. US (5,305,384) in view of Dunn et al. US (6,169,805).

Regarding claims 4,14 and 24: Ashby discloses the method according to claim 1 comprising the steps of receiving, input analog signal from said microphone; encrypting input analog signal utilizing public key encryption; passing said encrypted input analog signal to said radio. But doesn't explicitly disclose using a

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java application to perform those steps. However Dunn discloses a method for securing communication over insecure networks where he uses a java program that accepts a data file as an input and utilizes a decryption key to encrypt the file and convert the file to encrypted form to be transmitted. (Col 3, lines 24-41 and Col 4, lines 54-64). Therefore it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify Ashby's system with the teaching of Dunn to include a java program that runs on a personal computer operating system and executes the step of accepting input from microphone; encrypting said input using the java application and passing the input in its encrypted form to the radio. One would be motivated to do so in order to eliminate the need for connecting a special purpose computer or hardware to the radio for performing the processing of input and/or output signals and allow the radio to be connected to any general purpose computer capable of running java applications.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Firas Alomari whose telephone number is (571) 272-7963. The examiner can normally be reached on M-F from 7:30 am - 4:00 pm.

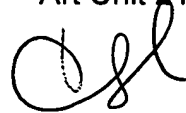
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, AYAZ SHEIKH can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FA

Firas Alomari
Examiner
Art Unit 2136



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4/17/05